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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/082,593	02/22/2002	Akira Hamamatsu	16869P-041800US	5740
20350	7590	12/07/2004	EXAMINER	
TOWNSEND AND TOWNSEND AND CREW, LLP TWO EMBARCADERO CENTER EIGHTH FLOOR SAN FRANCISCO, CA 94111-3834			TRINH, HOA B	
			ART UNIT	PAPER NUMBER
			2814	

DATE MAILED: 12/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/082,593

Applicant(s)

HAMAMATSU ET AL.

Examiner

Vikki H Trinh

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 12 November 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 7, 14, 16, and 17-20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

In claim 7, the step of “classifying defects at said detecting as disposed in a transparent film or a non-transparent film ...” is new matter.

In claims 14 and 16, the step of “setting is performed without capturing an image of an actual wafer” is new matter.

In claim 17, the step of “computing an estimate of an amount of light to be detected during said inspecting with said inspection conditions” is new matter.

In claim 18, the step of “controlling said amount of light detected during said inspecting with said inspection conditions” is new matter.

In claim 19, steps (ii), (iii), (iv), and (v) are new matter.

In claim 20, the step of “classifying defects with said computer processor as disposed in a transparent film or a non-transparent film” is new matter.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Regarding claims 1, 4, and 7 the word "means" is preceded by the word(s)

"communication" in an attempt to use a "means" clause to recite a claim element as a means for performing a specified function. However, since no function is specified by the word(s) preceding "means," it is impossible to determine the equivalents of the element, as required by 35 U.S.C. 112, sixth paragraph. See *Ex parte Klumb*, 159 USPQ 694 (Bd. App. 1967).

***Claim Objections***

5. Claims 14 and 16 are objected to because of the following informalities: In claim 14, line 16, and claim 16, line 1, the term "without" denotes a negative connotation. Applicant is advised to positively recite any claimed subject matter. Appropriate correction is required.

***Drawings***

6. The drawing is objected to because in figure 8, the term "recognisable" should be "recognizable". Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be

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necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

9. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

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invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

10. Claims 1-16 and 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Admitted Prior Art (APA), specification pages 2-4 and figure 1, in view of Chevallier et al. (6,115,546).

APA discloses a method for setting inspection conditions for semiconductor devices having the steps of accessing a design database (step 4, fig. 1) based on a product name and a process name entered by a user (step 4, fig. 1), the user automatically setting a first inspection condition (step 5, fig. 1) using chip matrix and chip size data (step 5, fig. 1) which are obtained by accessing a design database (step 4, fig. 1) via communication means (step 5, fig. 1); inspecting the devices with the inspection condition (step 5, fig. 1); automatically revising (step 10, fig. 1) said inspection condition by using data obtained by the inspecting; and inspecting semiconductor devices using said revised inspection condition (step 11 and step 12, fig. 1) and then outputting results of the inspection (step 13, fig. 1). See figure 1.

Note that the term “automatically” may be interpreted as a fluid manner (for example, a user performs a function without any guessed work).

Note that the broadly phrase “communication means” may be interpreted as a person, a pen, a booklet, a manual, a schedule, or any printed material, etc.

Note: the term “revise” is to mean “(v. t.) to review, alter, and amend; as, to revise statutes; to revise an agreement; to revise a dictionary”.

<http://www.onelook.com/?other=web1913&w=Revise>

Note: the term “classifying” is to mean the same as “setting the areas to be inspected and to be excluded according to step 8. Also the term “classify” is defined as “—*v.t., -fied, -fy•ing.*

1. to arrange or organize by classes; order according to class. 2. to assign a classification to (information, a document, etc.). Cf. **classification** (def. 5).” See

<http://www.infoplease.com/dictionary/classify>

However, APA does not explicitly disclose that the user enters inspection data through a terminal/computer processor using a computer keyboard, as a “communication means”.

Chevallier teaches a method of setting a data processing system 10 (fig. 1) which enables a user 14 (fig. 1) to automatically access a design database 12 (fig. 1) through a computer 16 (fig. 1) in response to commands entered by means of a data input device or keyboard 18 (fig. 1). The database 12 (fig. 1) has graphical and textual information contained in the form of data files that the user inherently creates to correspond the names of the product and/or process (col. 3, lines 62-63).

APA and Chevallier are in the same field of creating a method of verifying or inspecting semiconductor devices.

Therefore, as to claims 1, 4, 7, 9, 10, 11-13, it would have been obvious to one skilled in the art at the time the invention of made to modify the invention of APA with an automated system such as a computer processor to access the database, as taught by Chevallier, so as to reduce time and improve reliability in inspecting and verifying semiconductor devices (Chevallier, col. 2, line 16).

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As to claims 2,5, 14, 16, and 19-20, the method includes the inspection conditions (step 5, APA, fig. 1) set that includes the information whether or not an area for inspection is in an area in which false alarms tend to occur (APA, step 8, figure 1). This allows the defects detected to be classified according to areas to be included or excluded (step 8, fig. 1). The method includes the step of automatically setting is performed. APA, step 11, fig. 1, shows the step of setting an inspection sensitivity to a level to suit design rules for each area within a semiconductor device chip.

As to claims 3, 6,9, inspection conditions set are revised (step 10, fig. 1) so that faulty matter is detected based on the results of a review and classification of defects detected during inspection of the devices. See figure 1 and page 4, second paragraph.

As to claim 8, the images are displayed on a screen. See specification, page 2, first paragraph.

As to claim 15, the design database is a physically remote design database. (Chevallier, fig. 1).

### ***Response to Arguments***

Applicant's arguments filed 11/12/04 have been fully considered but they are moot in view of the new rejection.



### **Conclusion**

The cited prior art does not explicitly teach or disclose either in singly or in combination the step of computing an estimate of an amount of light to be detected with the inspection conditions, as claimed in claims 17-18.

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Vikki Trinh whose telephone number is (571) 272-1719. The Examiner can normally be reached from Monday-Friday, 9:00 AM - 5:30 PM Eastern Time. If attempts to reach the examiner by telephone are unsuccessful, the Examiner's supervisor, Mr. Wael Fahmy, can be reached at (571) 272-1705. The office fax number is 703-872-9306.

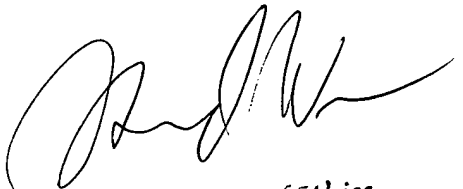
Any request for information regarding to the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Also, status information for published applications may be obtained from either Private PAIR or Public Pair. In addition, status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. If you have questions pertaining to the Private PAIR system, please contact the Electronic Business Center (EBC) at 866-217-9197 (toll free).

Lastly, paper copies of cited U.S. patents and U.S. patent application publications will cease to be mailed to applicants with Office actions as of June 2004. Paper copies of foreign patents and non-patent literature will continue to be included with office actions. These cited U.S. patents and patent application publications are available for download via the Office's PAIR. As an alternate source, all U.S. patents and patent application publications are available on the USPTO web site ([www.uspto.gov](http://www.uspto.gov)), from the Office of Public Records and from commercial sources. Applicants are referred to the Electronic Business Center (EBC) at

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<http://www.uspto.gov/ebc/index.html> or 1-866-217-9197 for information on this policy. Requests to restart a period for response due to a missing U.S. patent or patent application publications will not be granted.

Vikki Trinh,  
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AU 2814

  
*Howard Weiss*  
~~Patent Examiner~~  
*Prmy*